



Overview of 54-Inch Main Break

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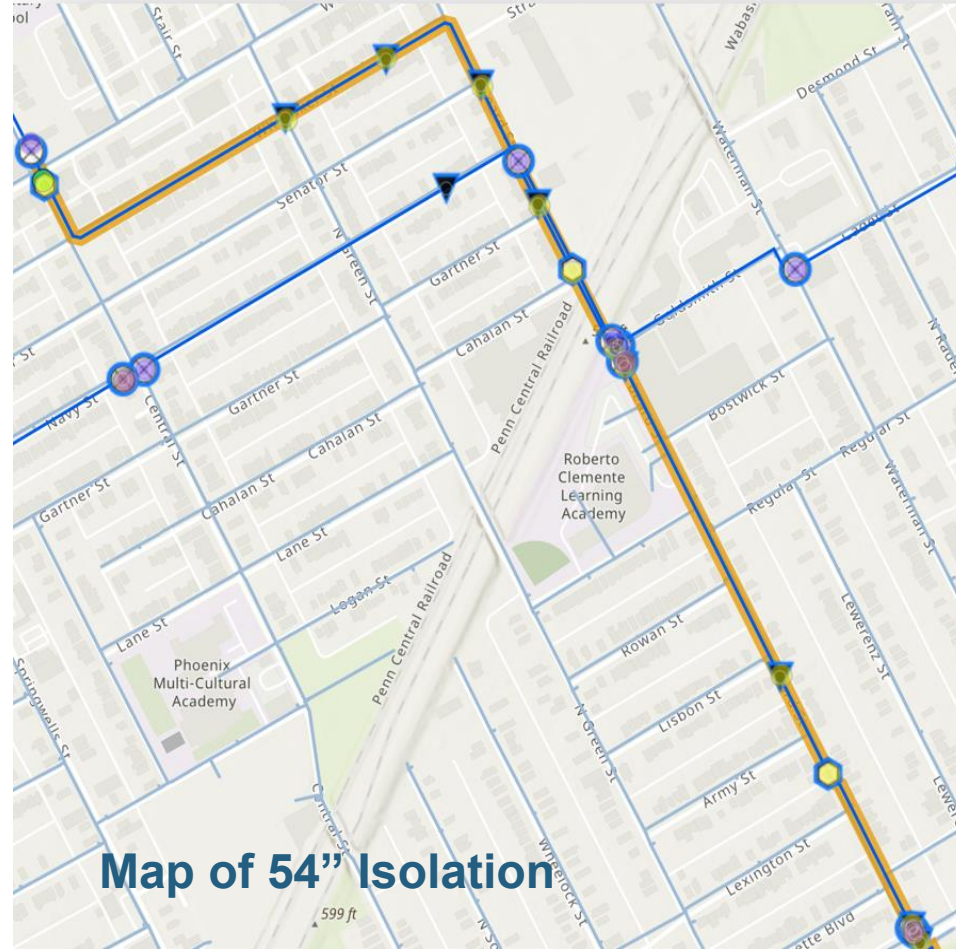
March 26, 2025

Overview of 54-Inch

- On February 17, 2025, the 54-inch transmission main experienced a catastrophic break at the intersection of Beard Street and Rowan Street in Southwest Detroit.
- The 54-inch transmission main was constructed in 1930 and the pipe material is welded steel.
- The failure was along the longitudinal weld and was ~9 feet in length at the 6 o'clock position.



Water Main Break Location



Response Timeline of First 48 Hours

February 17, 2025

Notification to GLWA at approximately 4:00 am

February 17, 2025

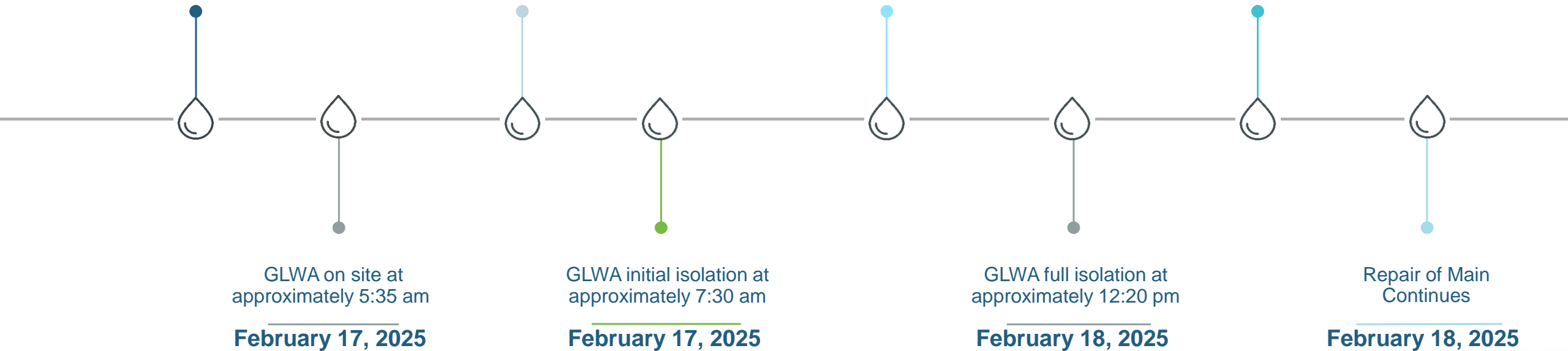
GLWA located isolation valves at approximately 6:30 am

February 17, 2025

Dewatering at Break Location started at approximately 5:00 pm

February 18, 2025

GLWA starts Excavation & Shoring to Remove the Broken Main at approximately 1:00 pm



Repair of Water Main

Friday, February 21	15-feet of 54-inch pipe was installed
Monday, February 24	New access hatch was installed on the new section of pipe
Thursday, February 27	Concrete encasement was placed
Friday, February 28	Backfill of the excavation started
Saturday, March 1	DWSD's 6-inch water main repair started
Saturday, March 8 and 9	DTE repaired the gas main
Monday, March 10	Roadway and sidewalk restoration started
Thursday, March 13	Beard Street reopened with a temporary road
Road and green space restoration is scheduled to be completed by end of May 2025	



Pipe Isolation & Repair

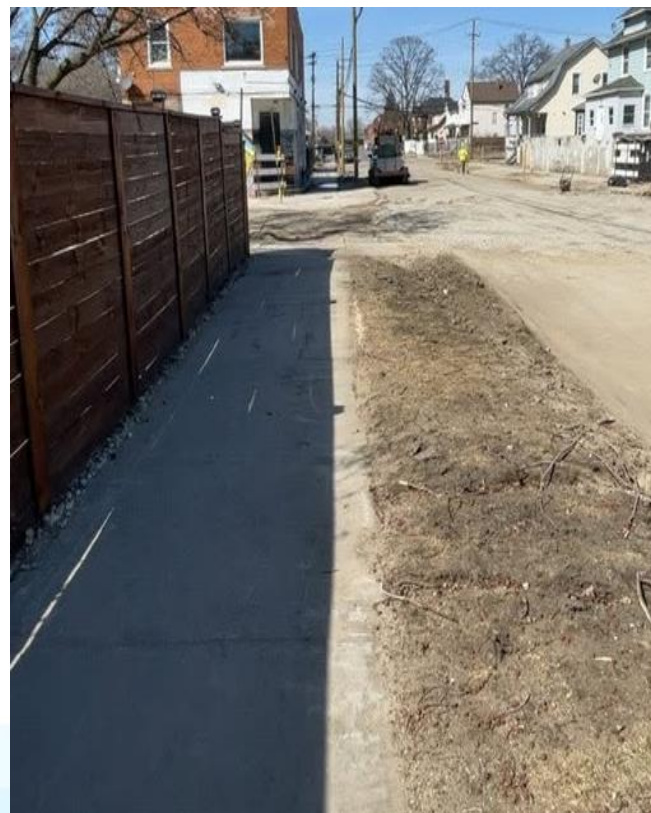


Repair In Process



Site Restoration





Temporary Road Restoration

54-Inch / 66-Inch Renewal Options

Water Engineering and Operations are going to complete field testing to assess the potential abandonment section. If field testing indicates mains along Jefferson (without Beard Main) can supply the Water Resource Recovery Facility, leave isolated section of Beard/Rowan out of service until pipeline renewal is completed.

Water Engineering is evaluating renewal options:

- 💧 Carbon Fiber Reinforced Polymer (CFRP)
- 💧 High-Density Polyethylene (HDPE) Slip Lining
- 💧 Steel Slip Lining
- 💧 All proposed alternatives are American Water Works Association (AWWA) Class 4 Lining Technologies, meaning that the liner pipe (HDPE, steel, CFRP) is a fully structural pipe liner that can support internal pressure of pipe without relying on the host pipe.



Questions?